AMENDMENTS TO THE SPECIFICATION

Please delete the paragraph at page 1, line 17 and replace as follows:

(3) The procedure can have a limited amount of "structural" variability~~(i.e.,~~.

Please delete the paragraph beginning at page 13, line 3 and replace as follows:

Referring now to FIG. 1, a method 100 of constructing a procedure model using simultaneous alignment and generalization, in accordance with one embodiment of the present invention, is shown. As illustrated in FIG. 1, the procedure model is constructed by optimizing a functional that captures the goodness of alignment and generalization. An initial alignment of two or more traces is computed (at 105) and one or more aligned steps of the traces are generalized (at 105). As used herein, the terms "generalize" and "compute a generalization" are used interchangeably. One method of computing an initial alignment and generalization includes, but is not limited to, performing a random alignment of the one or more traces. The initial alignment is used to compute (at 110) a procedure model. One of ordinary skill in the art would appreciate that there are different ways of computing a procedure model, which are strictly dependent on the characteristics of the specific class of models used to describe the procedure. A specific example is described later in this patent application with reference to FIG. 2, where the class of procedure models is the class of Hidden Markov Models. Training traces are aligned to the procedure model. A best alignment and generalization is computed ~~(at 115)~~ from the procedure model and a measure of goodness of alignment-generalization is computed ~~(at 120)~~ for the best alignment and generalization (at 115). The possible alignments are evaluated (at 125) using a goodness of alignment-generalization functional. If the evaluation (at 125) determines (at 130) the procedure model computed (at 110) achieves an optimum of the functional, the method

100 terminates (at 135). That is, the value of the goodness of alignment-generalization functional is either the maximum possible (if larger values denote better alignment/generalization) or the minimum possible (if smaller values denote better alignment/generalization). For example, if the alignment/generalization is measured using the rate at which the procedure steps are correctly predicted, then larger values denote better alignment/generalization. If the alignment/generalization is measured using the rate at which the procedure steps are incorrectly predicted, then smaller values denote better alignment-generalizations. Otherwise, the method 100 computes (at 110) the procedure model again.

Please delete the paragraph beginning at page 17, line 12 and replace as follows:

(4) let e(t.sub.ij, M) be equal to 1 if the action a.sub.ij is predicted correctly by the model given (t.sub.i1, . . . ,t.sub.i(j-1)) and s.sub.ij, and let f(.,.) be a monotonically increasing function ~~if it~~ with two arguments. The function f(g(tij,M),a(tij,M)) can then be used as a goodness of alignment-generalization measure. A simple example is f(g)(t.sub.ij, M)), e(t.sub.ij, M)=g(t.sub.ij, M)+e(t.sub.ij, M). Where alignment and generalization are equally weighted, or more generally, f(g(t.sub.ij, M), e(t.sub.ij, M)=.alpha.g(t.sub.ij, M)+(1-.alpha.)(e(t.sub.ij, M)), where .alpha. is a number between 0 and 1. The larger the value of .alpha., the bigger the importance the goodness of generalization over the goodness of alignment, while the smaller the value of .alpha., the bigger the importance of the goodness of alignment over the goodness of generalization.